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In the United States Patent and Trademark Office

Serial No. _____

Appn. Filed : _____

Applicants: Yuri Yaport and Genisim A. Tsilker

Appn. Title: METHOD AND SYSTEM FOR PARALLEL DATA TRANSMISSION ON DEMAND TO AN UNLIMITED NUMBER OF CLIENTS WITHOUT ACKNOWLEDGMENT AND ON THE BASIS OF CONSTANT DATA AVAILABILITY

Examiner/GAU: _____

Mailed: May 24, 2001

At: Santa Clara, CA

Information Disclosure Statement

Assistant Commissioner for Patents

Washington, District of Columbia 20231

Sir:

Attached is a completed Form PTO-1449 and copies of the pertinent parts of the references cited thereon. Following are comments on references pursuant to Rule 98:

U.S. Patent No. 6,101,180 issued in August 2000 to P. Donahue, et al. discloses a method of multicasting digital data to a user accessing an Internet connection. The method includes placing digital data that is to be multicast in IP protocol to generate IP digital data. The IP digital data is transmitted from a transmission site to a remote Internet point of presence through a dedicated transmission channel substantially separate from the Internet backbone. The dedicated transmission channel may be, for example, a satellite channel. At the remote Internet point of presence, the IP digital data

is multicast for delivery to at least one receiving Internet user's apparatus connected to but distal from the remote Internet point of presence. However, the above method does not solve the problems associated with limitations of the existing Internet, but rather creates other communication channels for buffering the Internet with additional communication channels, such as satellite channels.

""On Demand" systems have been attempted by the cable TV industry (see the article in the Internet at http://www.cs.tut.fi/tlt/stuff/vod/VoDOverview/vod.html#intro . Such systems attempt to transport the program or show from a central repository (server) to the user (client) in response to his/her request. To initiate the request, the user selects from a list of candidate programs and requests that the system deliver the selected program.

The "on demand" model of content delivery requires a direct connection between each server and each listener (client), and the server must be capable of delivering all the programs to the requesting clients at the time at which the client demands the program.

An article available in the Internet at http://www.isoc.org/inet99/posters/087/ describes "hybrid-type" multicast data distribution systems". Such systems are a combination of a unicast system with a multicast system. This s system combines the multicast data distribution with confirmation features such an acknowledgement. However, the described system is yet not sufficiently reliable since reliability is supported only due to retransmission of the data. On top of that, such system, if implemented, would be very expensive as it requires many complex routers. Probably, for this reason the hybrid systems have not yet found commercial application.

Another disadvantage, which is common for all known data distribution systems, is that all data is transmitted sequentially. In other words, even if the data is divided into separate groups (packets), all the groups are transmitted one after another until the entire data entity is received. In the case of a large amount of requested data, such as, e.g., several gigabytes, the transmission takes a substantial amount of time. In other words, the scheme of data transmission is linear and the time is proportional to the volume.

Thus, none of the cited references discloses, as claimed in our independent Claim 1 with dependent Claims 2 to 18 and independent Claim 19 with dependent Claims 20 and 21, a method of data transmission on demand to an unlimited number of clients without acknowledgment on the basis of constant data availability of the entire information on a router on the server side that constantly receives an updated information from the server in an endless mode so that any client at any time can obtain this information without individual sessions with the server, the information being divided into segments and transmitted through parallel channels simultaneously without acknowledgement.
Furthermore, none of the cited references discloses, as claimed in our independent Claim 22 with dependent Claim 23, in independent Claim 24 with dependent Claim 25, and in independent Claim 26 with dependent Claim 27,
a high-availability data distribution system for parallel data transmission on demand comprising a data transmission server, which constantly transmits multiple streams of information to a router or switch, which provides a support for multicast groups, so that at any time any client can subscribe to a particular multicast group for receiving the data without individual client-server sessions directly from at least two routers, one of which is located on the server's side, and another on the client's side.

Respectfully,

Yuri Yaport (on behalf of the Applicants)
2958 Barkley Avenue
Santa Clara, CA 95051
408-985-4840

Sheet _____ of _____

FORM PTO-1449 (Substitute)

LIST OF PRIOR ART CITED BY APPLICANT

(Use several sheets if necessary)

ATTY. DOCKET NO.	SERIAL NO.
APPLICANT Yuri Yaport et al.	
FILING DATE	GROUP

JC868 U.S. PTO 09/865904 05/24/01

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA	6,101,180	2000	P. Donahue et al.			
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						

FOREIGN PATENT DOCUMENTS

	AL						
	AM						
	AN						
	AO						
	AP						

OTHER PRIOR ART *(Including Author, Title, Date, Pertinent Pages, Etc.)*

1)	AR	Reliable IP Multicast. Reprint from http://www.isoc.org/inet99/posters/087/
2)	AS	Cable Video-on-Demand Reprint from http://www.cs.tut.fi/tlt/stuff/vod/VODOverview/vod.html
	AT	

EXAMINER	DATE CONSIDERED

*EXAMINER: *Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.*